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A NEW SPECIES OF *HYPERXIPHIA* MAA (HYMENOPTERA: XIPHYDRIIDAE) FROM JAPAN, REARED FROM WOOD OF *MACHILUS THUNBERGII* SIEB. AND ZUCC. AND *ARDISIA SIEBOLDII* MIQ.

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Abstract.—***Hyperxiphia tabunokii*, n. sp.**, from Amani-Oshima, Kagoshima Prefecture, Kyushu, Japan, is described and illustrated. Specimens emerged from wood of *Machilus thunbergii* Sieb. and Zucc. (Lauraceae) and *Ardisia sieboldii* Miq. (Myrsinaceae). A key is provided for the four Japanese species of *Hyperxiphia*.

Key Words: Symphyta, Xiphydriidae, *Hyperxiphia*, food plants, *Machilus*, *Ardisia*

Hyperxiphia Maa is a small genus of 10 species that occur in the eastern Palaearctic and Oriental regions. Three species, *H. leucopoda* (Takeuchi 1938), *H. nakanishii* (Takeuchi 1938), and *H. nodai* Togashi, 1982 (in Togashi and Hirashima 1982) are known in Japan. Recently, I received five specimens (two females and three males) of *Hyperxiphia* which emerged from wood of *Machilus thunbergii* Sieb. and Zucc. and *Ardisia sieboldii* Miq. collected at Mt. Yui, Amami-Oshima, Kagoshima Prefecture, Kyushu, Japan. These specimens are close to *H. nodai* , but they are distinguished from the latter by the number of antennal segments, by having a white ring at the apical portion of the forecoxa (Fig. 13), by the lengths of the third antennal segment and the hind basitarsus (Fig. 18), and by having an appendiculate vein at the base of vein 2A+3A of the forewing (Fig. 11). Also, these specimens do not key to any of the known species of *Hyperxiphia* in Maa (1949). Therefore, I concluded that these specimens represent a new species. In this paper, I describe and illustrate the new species and give a key to the Japanese species.

This species is placed in *Hyperxiphia* based on Maa's (1949) classification. *Hyperxiphia* is distinguished by the following: Propleuron in profile much longer than high; cells Rs and M present in the hindwing; maxillary palpus 5-segmented with last segment slightly longer than segments 3 and 4 together; labial palpus 4-segmented; and tarsal claws each with a small tooth near middle or base of claw.

Key to Japanese Species of *Hyperxiphia*

1. Head rufous; wings hyaline; legs entirely yellowish white . . . . . *leucopoda* (Takeuchi)
– Head black; wings slightly infuscte or hyaline (Fig. 1); legs black or yellowish . . 2
2. Legs entirely yellowish white; wings hyaline; antenna 12- or 13-segmented . . . . . *nakanishii* (Takeuchi)
– Legs brownish black or entirely black; forewing evenly infuscate; antenna 14- or 18-segmented 3
3. Antenna 14-segmented; forecoxa black; base of 2A+3A of forewing without appendiculate vein . . . . . *nodai* Togashi
– Antenna 18-segmented; forecoxa with white ring at apex (Fig. 13); base of vein 2A+3A of forewing with appendiculate vein (Fig. 11) . . . . . *tabunokii*, n. sp.

Fig. 1. *Hyperxiphia tabunokii*, holotype.

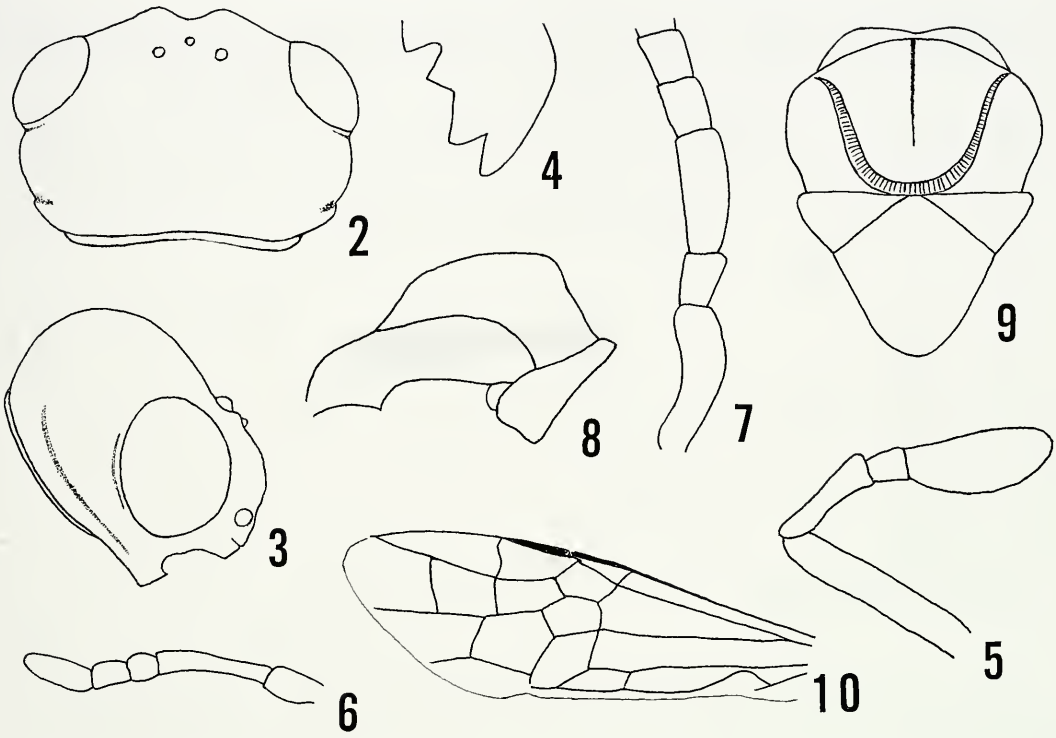
Hyperxiphia tabunokii Togashi, new species

(Figs. 1–20)

Female.—Length, 16 mm. Antenna, head, and body black. Wings evenly infuscate, stigma and veins dark brown to black. Legs black, but apex of forecoxa with white ring (Fig. 13).

Head (Fig. 2): Postocellar area slightly raised; OOL:POL:OCL = 1.1:1.0:3.5; interocellar, postocellar, and lateral furrows absent; frons raised; median fovea deep, elongate; lateral fovea deep and circular; antenno-ocular distance shorter than distance between antennal sockets (ratio 1.0:2.1); clypeus with a central tooth; malar space (including malar depression) nearly as long as diameter of front ocellus; occipital carina distinct; genal carina distinct to top of eye; postorbital groove distinct (Fig. 3); labial palpus 4-segmented (Fig. 5); maxillary palpus 5-segmented (Fig. 6); mandible quadridentate (Fig. 4). Antenna 18-segmented, slightly shorter than costa of forewing (ratio 1.0:1.2); scape curved (Fig. 7), slightly longer than third antennal segment (ratio 1.0:0.8) (Fig. 7); relative lengths of basal five segments about 2.8:1.0:2.3:1.0:1.0.

Thorax: Anterior half of mesoprescutum distinctly angulated in lateral view (Fig. 8); median suture of mesoprescutum distinct but posterior portion indistinct (Fig. 9); mesoscutellum rather flattened; cenchrus small, distance between them about four times breadth of one (ratio 1.0:4.0). Venation of forewing as in Fig. 10; base of vein 2A+3A of forewing with appendiculate vein (Fig. 11); venation of hindwing as in Fig. 12; petiole of anal cell of hindwing slightly shorter than



Figs. 2–10. *Hyperxiphia tabunokii*, holotype. 2, Head, dorsal. 3, Head, profile. 4, Mandible, front. 5, Labial palpus, ventral. 6, Maxillary palpus, ventral. 7, Basal 5 antennal segments, lateral. 8, Mesoprescutum, lateral. 9, Mesoprescutum, dorsal. 10, Forewing.

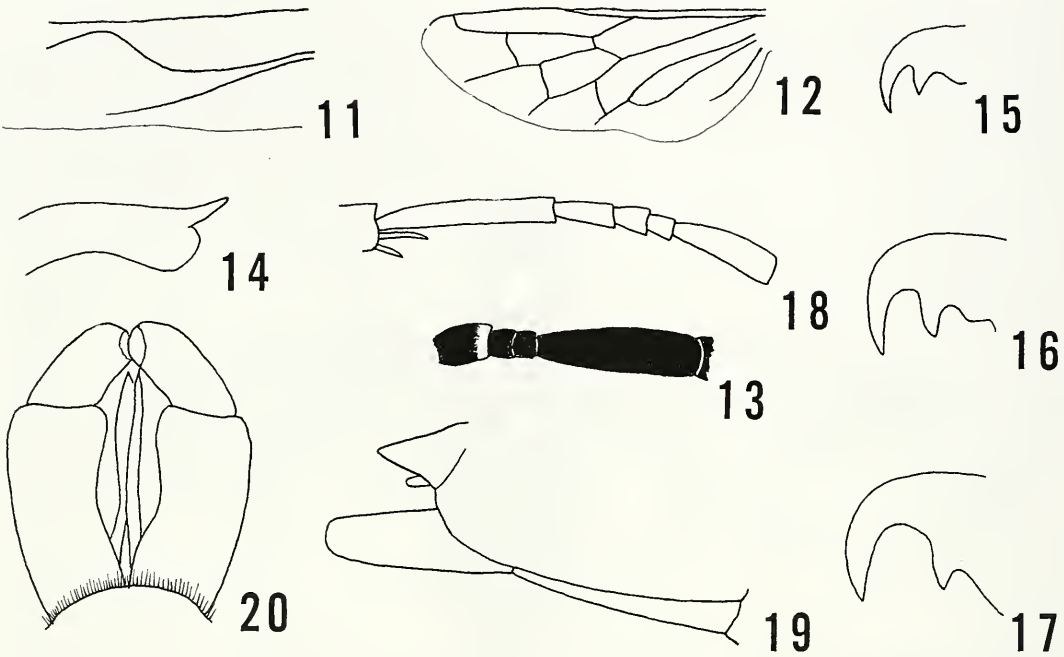
nervulus (cu-a) (ratio 1.0:1.3. Legs: Hind basitarsus longer than following three segments combined (ratio 1.0:0.7); foretibial spur as in Fig. 14; each taral claw with inner tooth, as in Fig. 15–17. Mid- and hind claws larger than foreclaw.

Abdomen: Propodeum with an oblique furrow along central line; length of sheath nearly as long as length of basal plate (Fig. 19); sheath as in Fig. 19.

Punctation: Vertex, postocellar area, and upper half of postocellar area impunctate, shining; lower half of postocellar area distinctly and rather closely punctured, interspaces between punctures nearly impunctate, shining; frons, inner orbits, supraclypeal area, clypeus, and malar space distinctly, coarsely, and irregularly sculptured; pronotum, mesoscutum, meso- and metascutellum, axilla, mesoscutellar appendate, and mesopleuron strongly, irregularly, and rugoso-subreticulately sculptured, but posterior portion of mesoprescutum nearly impunctate, shining; scrobiculate area separates median and lateral lobes (Fig. 9); central portion of propodeum nearly impunctate, shining; oblique furrow distinctly, rather closely punctured; second to last tergites covered with many transverse wrinkles.

Male.—Length, 12.0 mm. Structure and coloration similar to female, except for tarsal claw and male genitalia. Male genitalia as in Fig. 20; black but apical portion of harpes white. Posterior margin of subgenital plate nearly truncate. Claws of each leg similar in size.

Type material.—Holotype: Female, Mt. Yui, Amami-Oshima, Kagoshima Pref., 13.V.2005, bred from Machilus thunbergii, H. Makihara, leg. Paratypes: Female, same locality as for holotype, 26.VII.2004, bred from Ardisia sieboldii, H. Makihara, leg; 2 males, same locality



Figs. 11–20. *Hyperxiphia tabunokii*, holotype. 11, Appendiculate vein of forewing. 12, Hindwing. 13, Forecoxa, trochanters, and femu, lateral. 14, Foretibial spur, lateral. 15, Foretarsal claw, lateral, female. 16, Midtarsal claw, lateral, female. 17, Hind tarsal claw, lateral, female. 18, Hind tarsus, lateral. 19, Sawsheath and basal plate, lateral. 20, Male genitalia, dorsal.

as for holotype, 14.IX.2004, bred from Machilus thunbergii, H. Makihara, leg.; 1 male, same locality as for holotype, 6.V.2005, bred from Machilus thunbergii, H. Makihara, leg. Holotype and two paratypes (males) deposited in the collection of the National Science Museum (Nat. Hist.), Tokyo; 2 paratypes (female and male) deposited in the National Museum of Natural History, Smithsonian Institution, Washington, DC.

Distribution.—Japan (Kagoshima Prefecture, Amami-Oshima).

Food plants.—*Machilus thunbergii* (Lauraceae) (Japanese name: Tabunoki) and *Ardisia sieboldii* (Myrsinaceae) (Japanese name: Mokutachibana).

Etymology.—The names is the genitive form of the Japanese name of the food plant.

Remarks.—This new species is close to *Hyperxiphia nodai*, but it is distinguished from the latter by the 18-segmented antenna (14-segmented in *H. nodai*), by the antennal scape slightly longer than the third antennal segment (slightly shorter in *H. nodai*), by the hind basitarsus longer than the following three segments combined (shorter in *H. nodai*), by having a white ring on the apical portion of the forecoxa (entirely black in *H. nodai*), and by having an appendiculate vein at the base of 2A+3A of the forewing (absent in *H. nodai*). According to Maa's (1949) key, this new species goes to *H. melanaria* (Mocsáry) from Tonkin, but it is distinguished from the latter by the black tergites (8th to 9th tergites white in *H. melanaria*).

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